

Hazardous Waste Management

presented by the

Division of Waste Management

Operations
Engineering Section

&

Corrective Action
Engineering Section



Operations Engineering



Corrective Action Engineering



Resource Conservation and Recovery Act (RCRA)



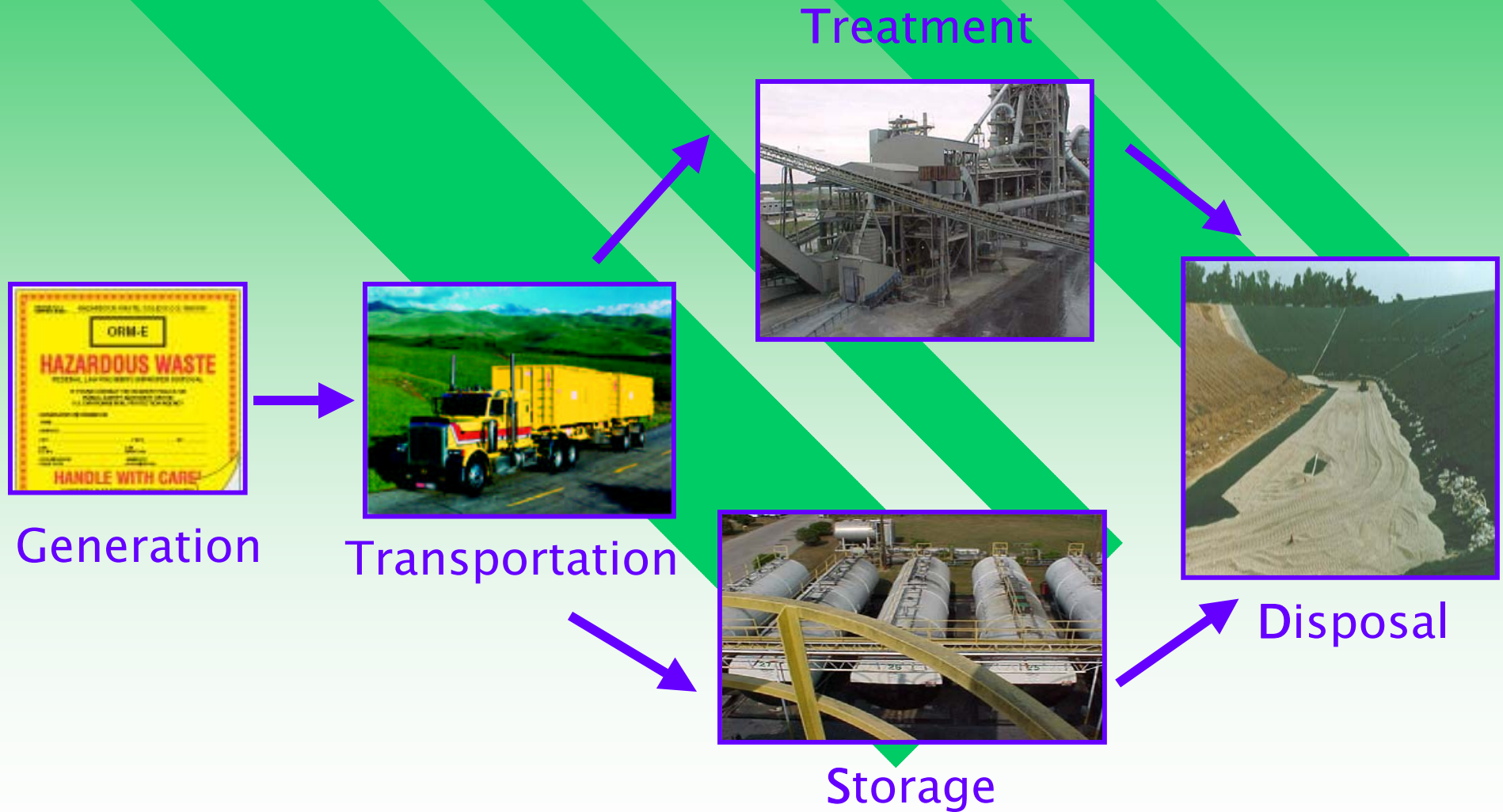
Enacted in 1976

Amended in 1984

3 Main Goals of RCRA



Cradle-to-Grave Approach



TSD Facilities



Interim Status

Granted based on existence prior to RCRA—still must comply with basic regulations

Extensive process

Permitted

Specific operating requirements

Under Order

Requiring specific activities

Treatment Facilities



Cement Kiln

Treatment Unit



Open Detonation

Storage Unit



Tanks

Storage Unit



Containers

Disposal Unit



Landfill



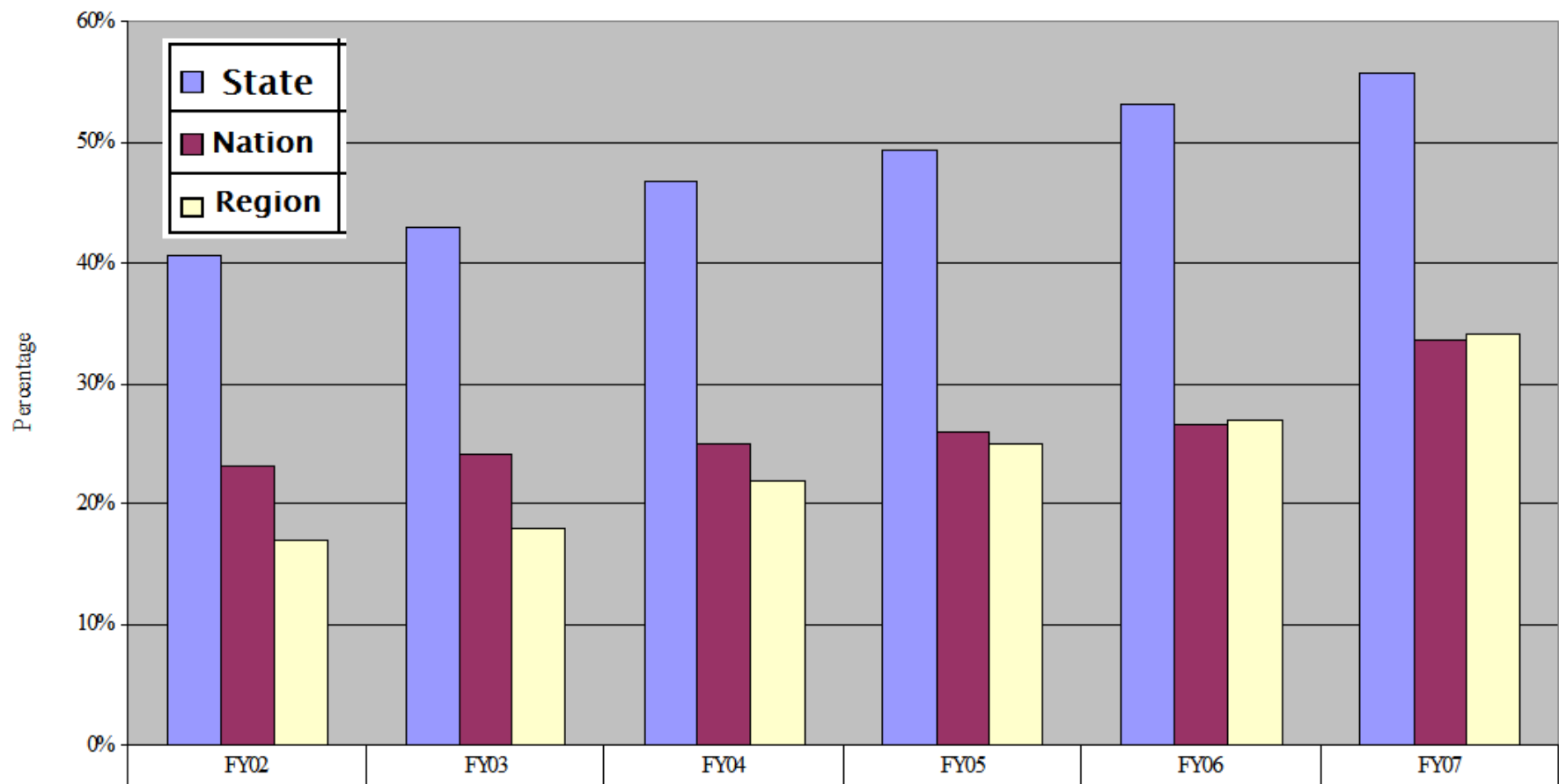
Soil Cap

Pinewood Site

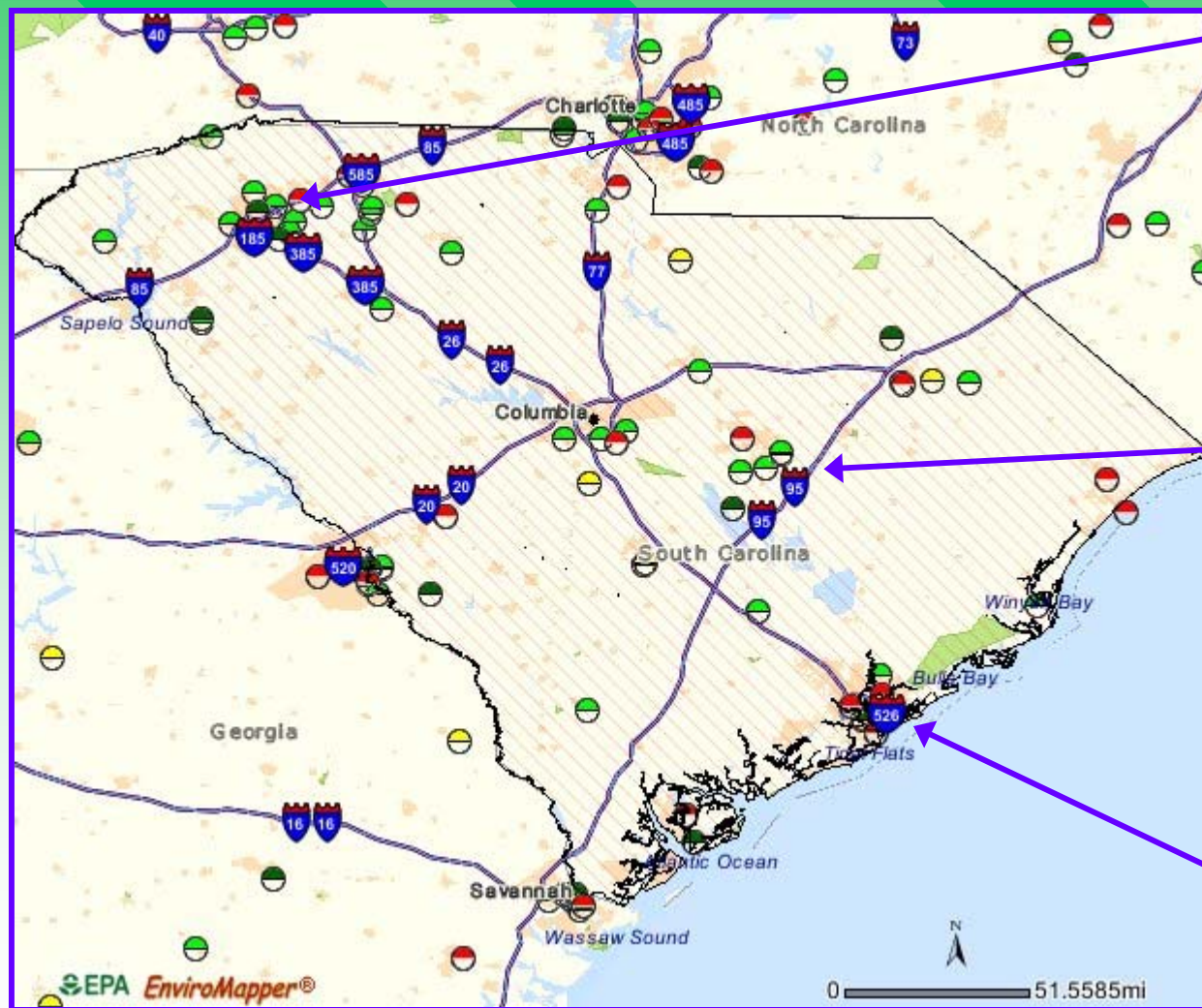


Former
Landfill
now
closed

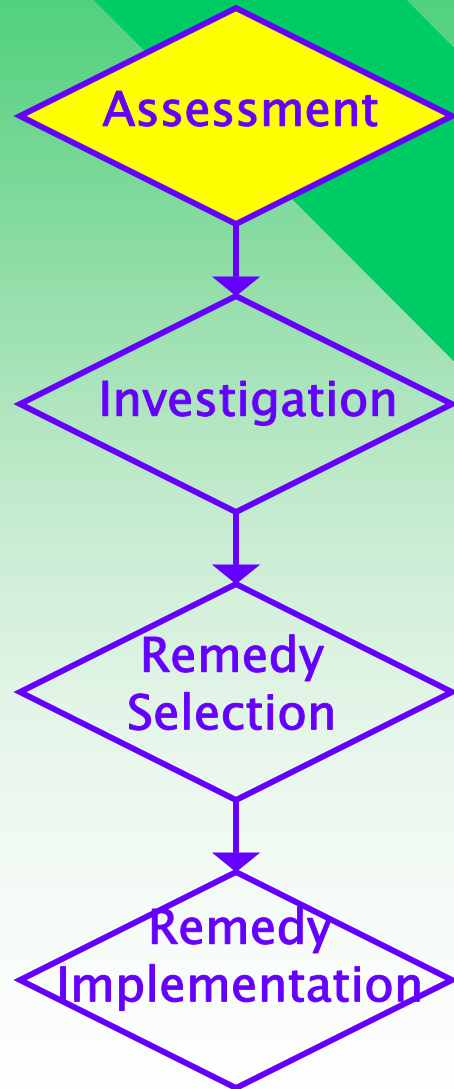
Hazardous Waste Site Cleanup Actions



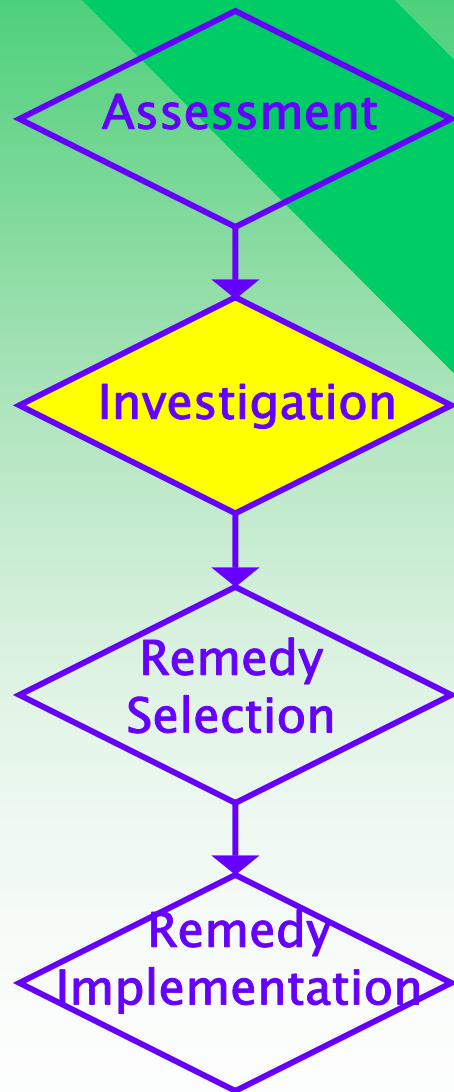
RCRA Corrective Action



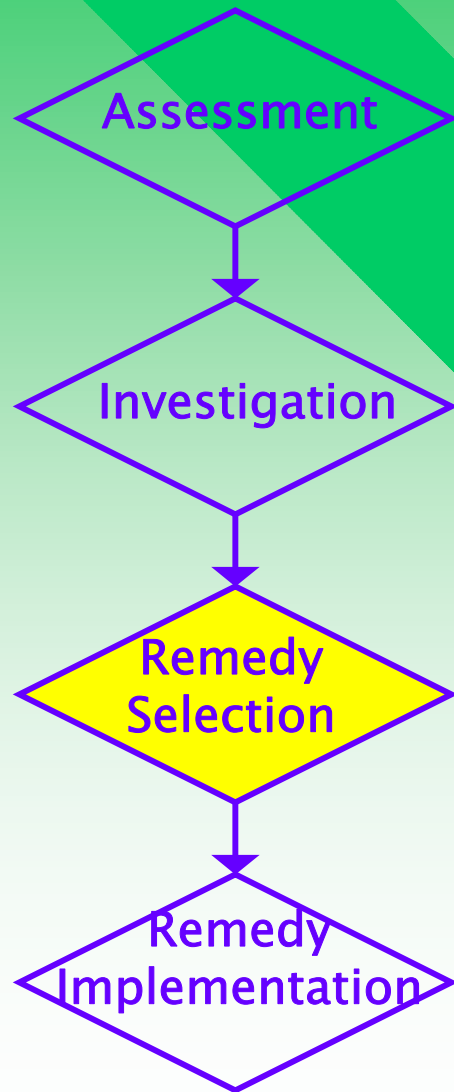
Corrective Action Process



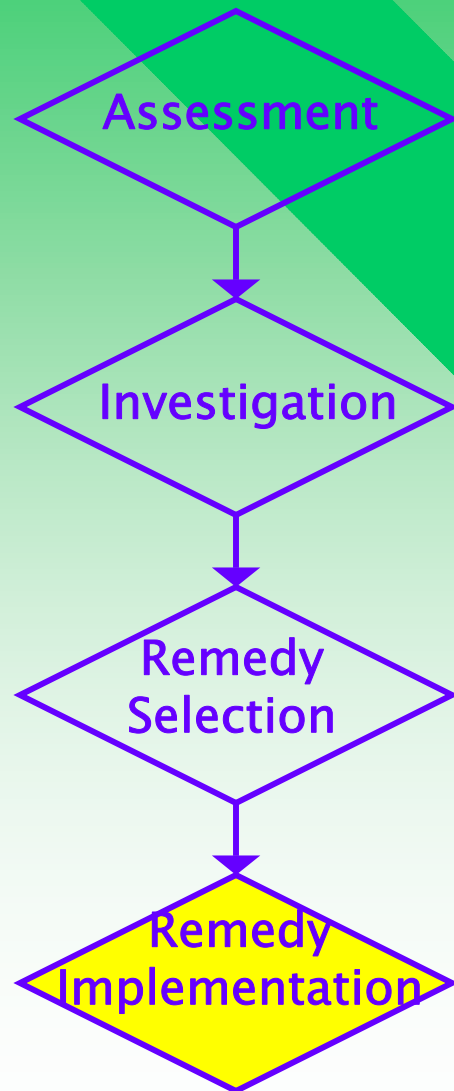
Corrective Action Process



Corrective Action Process



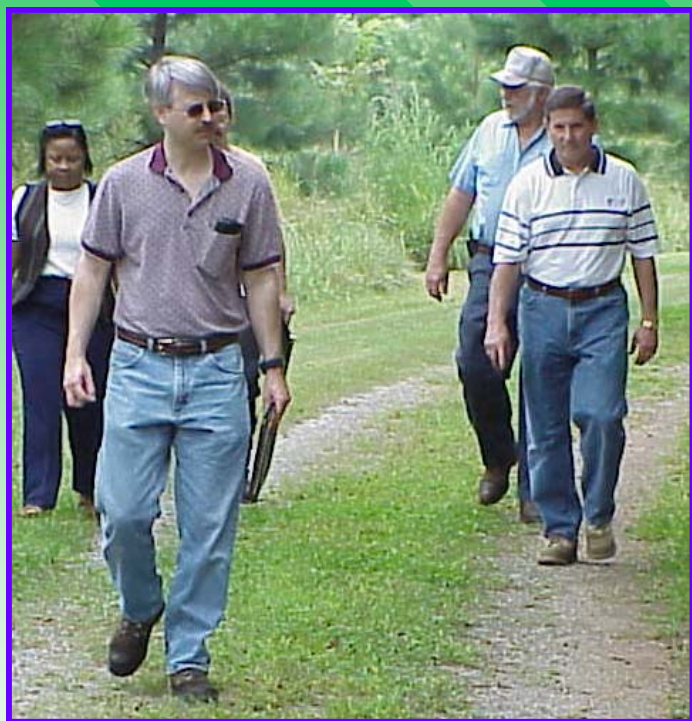
Corrective Action Process



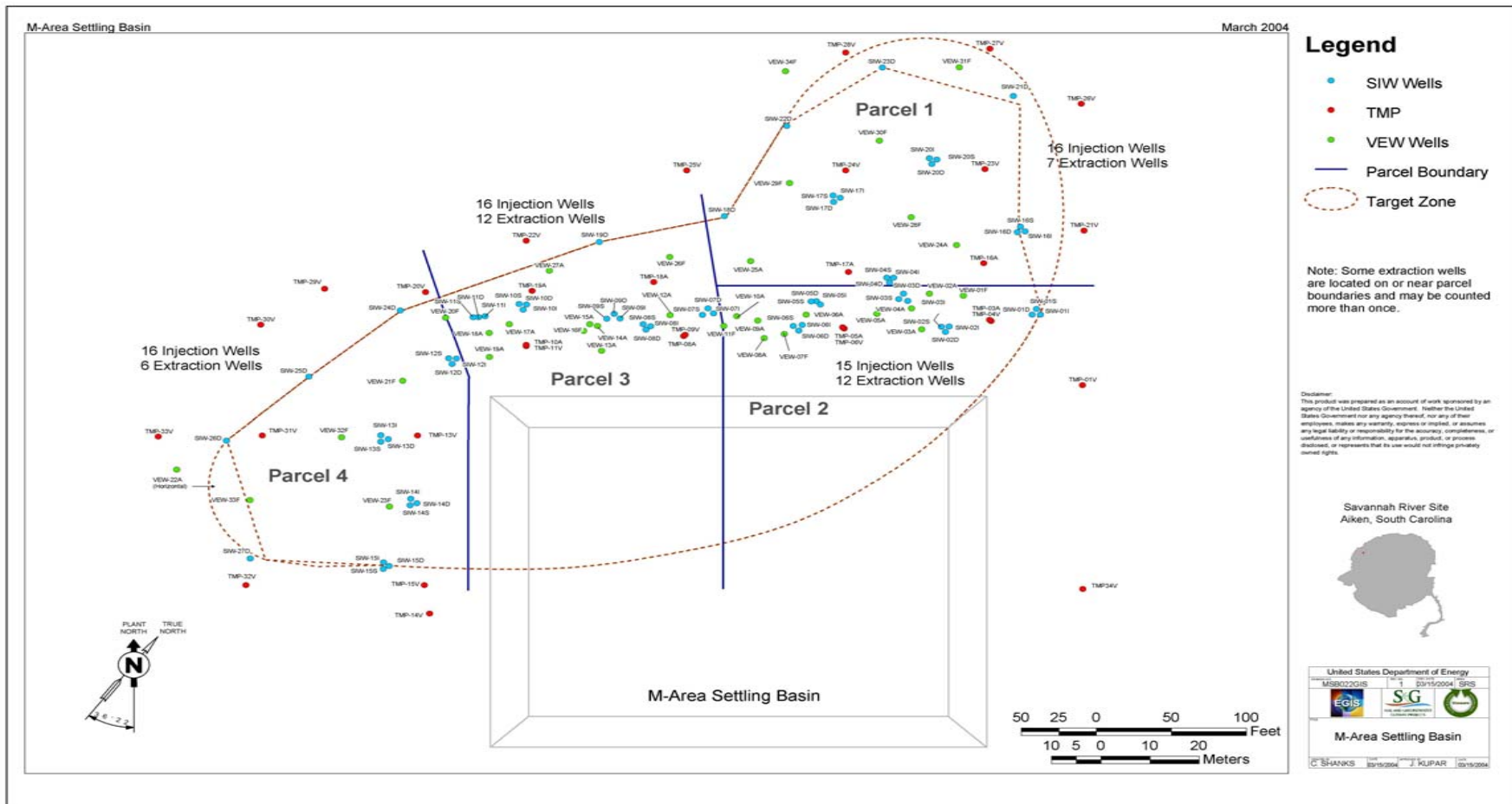
Groundwater Treatment System

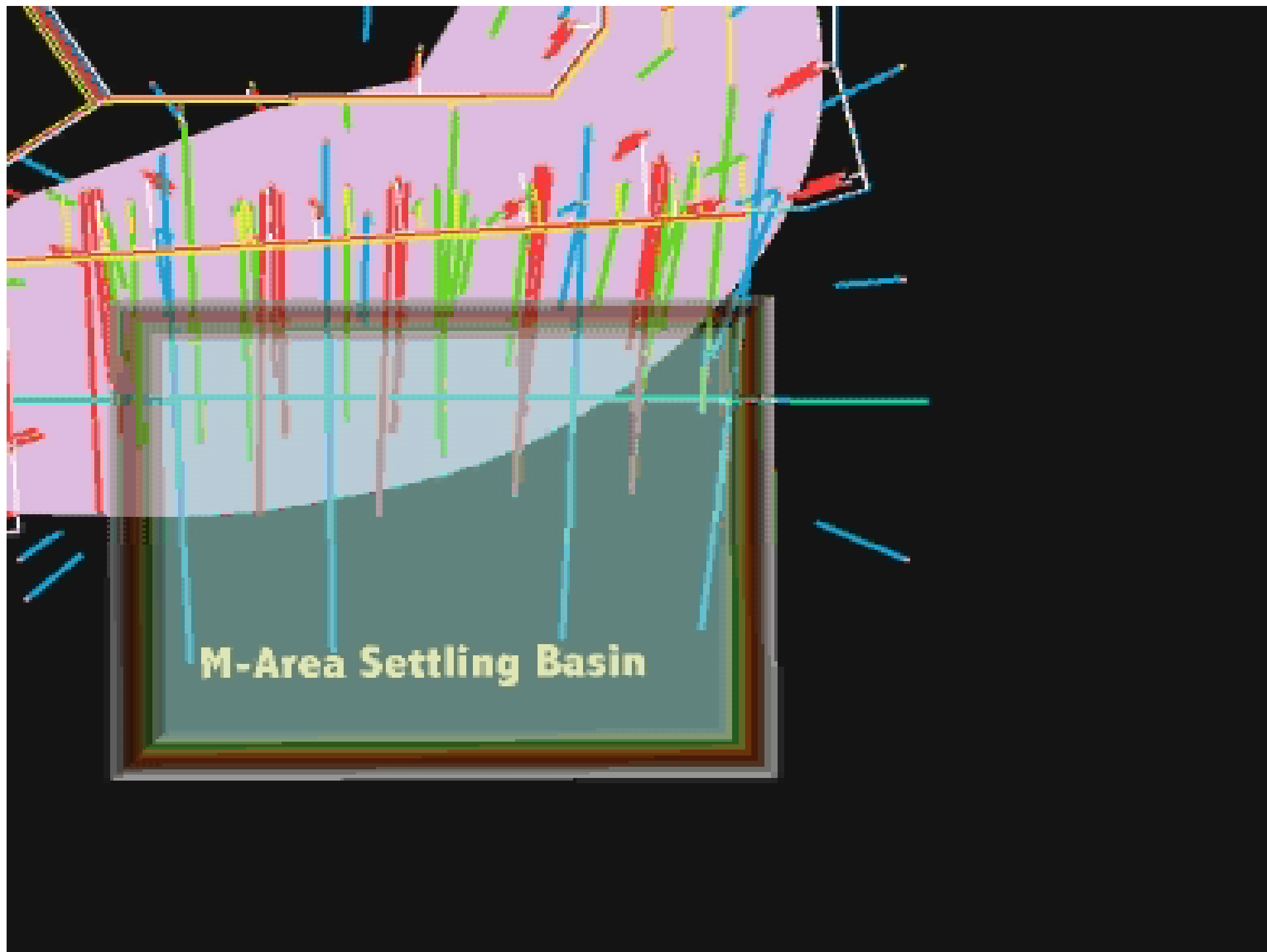


Corrective Action Case Studies...

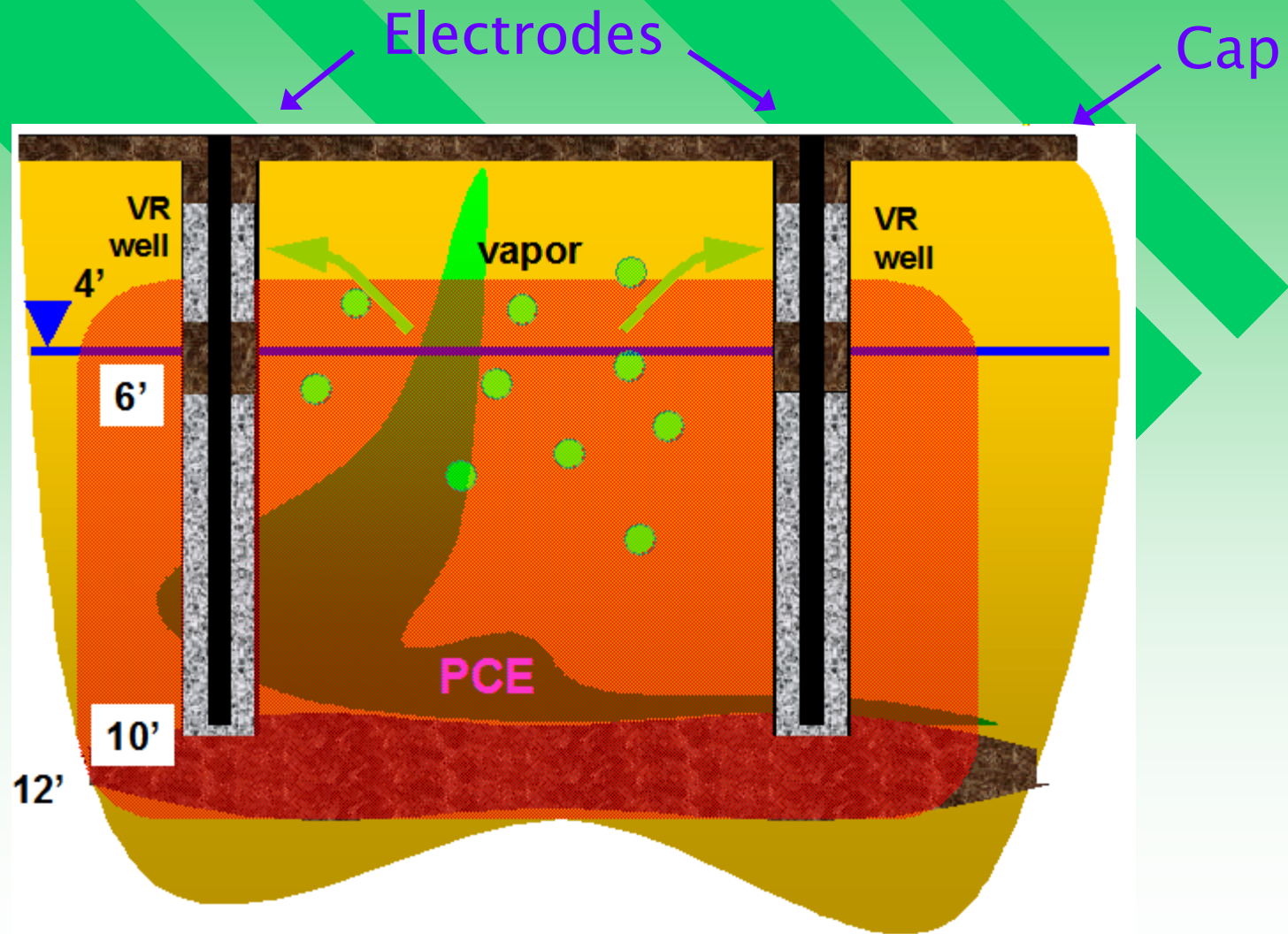


Dynamic Underground Stripping (DUS)





PCE Source Area Reduction Using Electrical Resistance Heating (ERH)



ERH Electrode Field



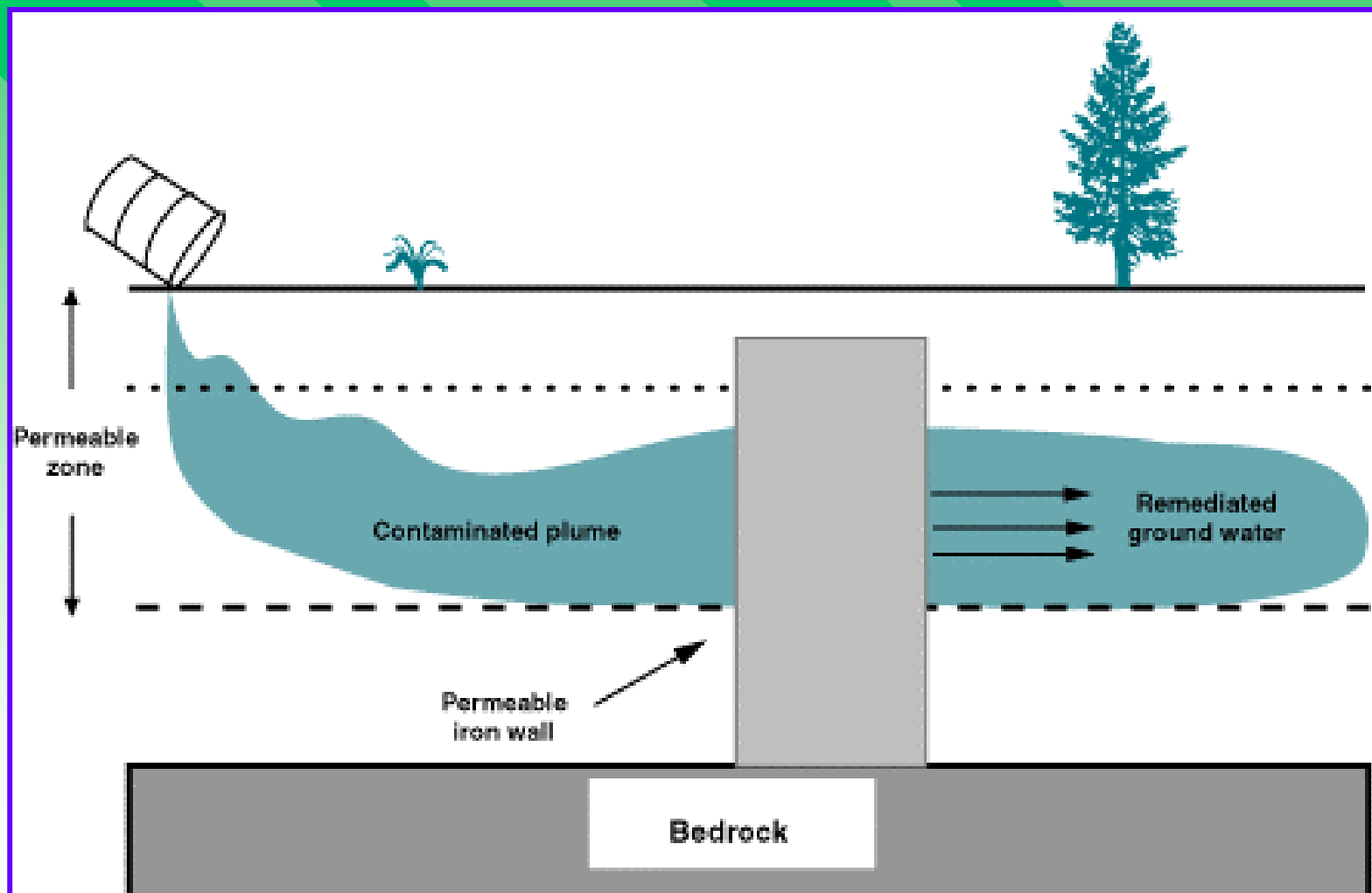
Permeable Reactive Barrier (PRB) Installation



- Iron filings fill the PRB wall



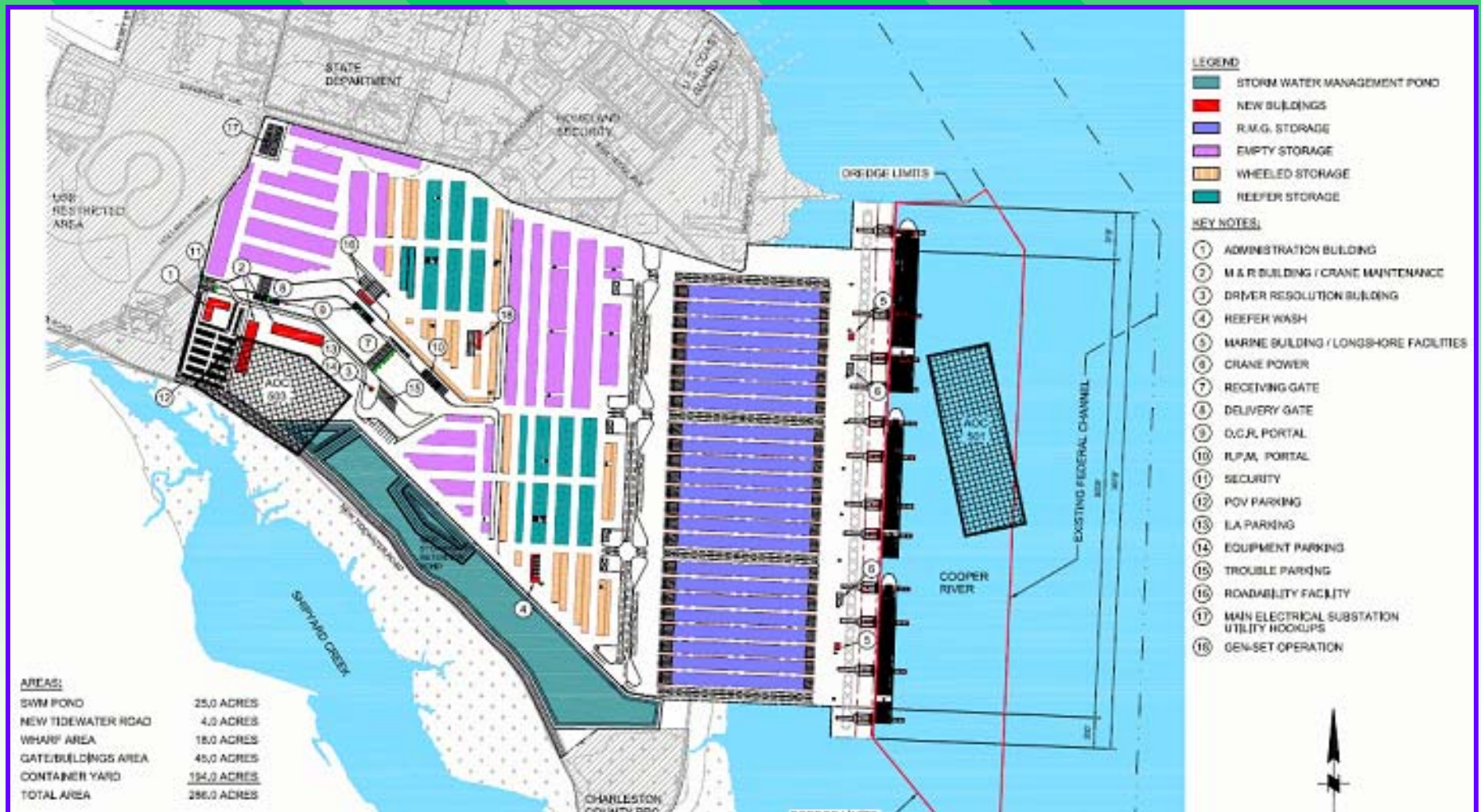
PRB at Work



Charleston Naval Base



Charleston Naval Base



Pre-Injection VOC Plume



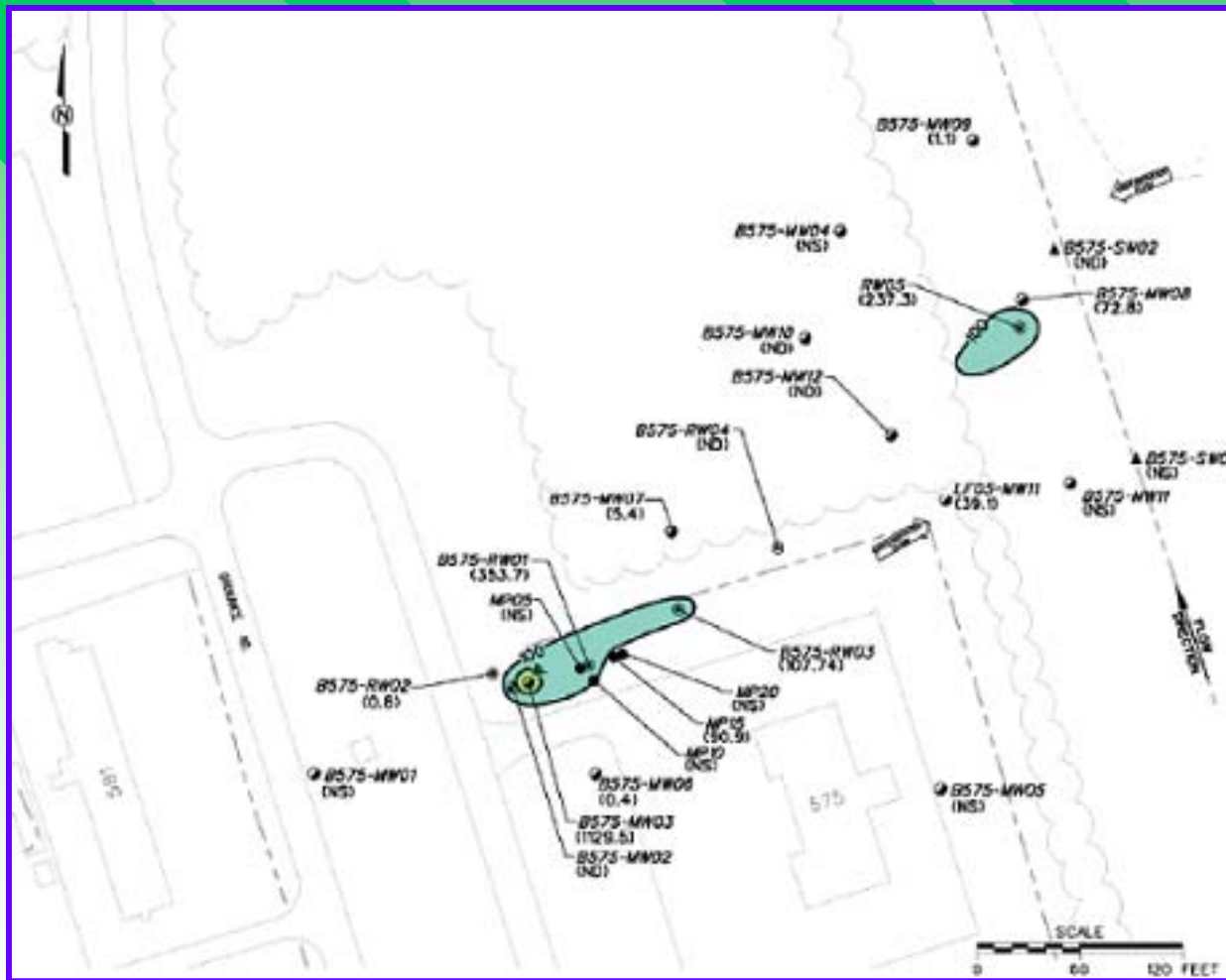
Permanganate Injection



Injection Well Field



Post-Injection VOC Plume



SRS T - Area

T- Area Before Remediation



T- Area During Remediation



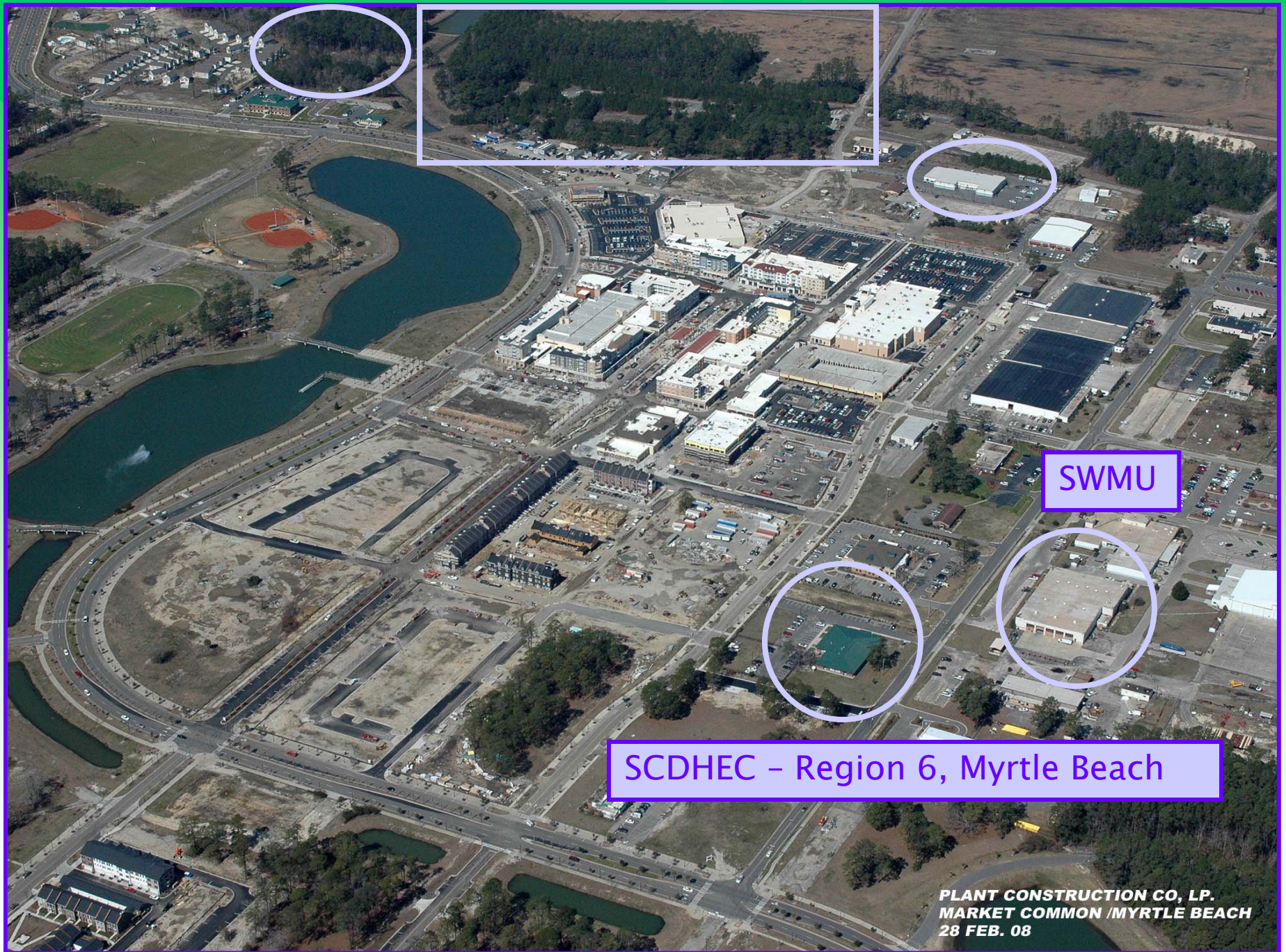
T-Area After Remediation





Myrtle Beach Air Force Base





SWMU

SCDHEC - Region 6, Myrtle Beach

PLANT CONSTRUCTION CO, LP.
MARKET COMMON /MYRTLE BEACH
28 FEB. 08

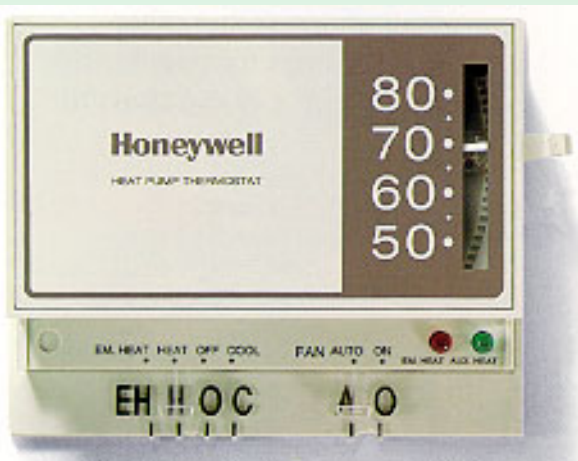
Other Issues

- Universal Waste
- Pesticides
- Off-site contamination
- Unexploded Ordinance
- Public Participation



Universal Waste

- Batteries
- Pesticides
- Thermostats
- Lamps



Pesticide Disposal

- Multi Agency Coordination
- Community Involvement
- One-time Collection and Disposal

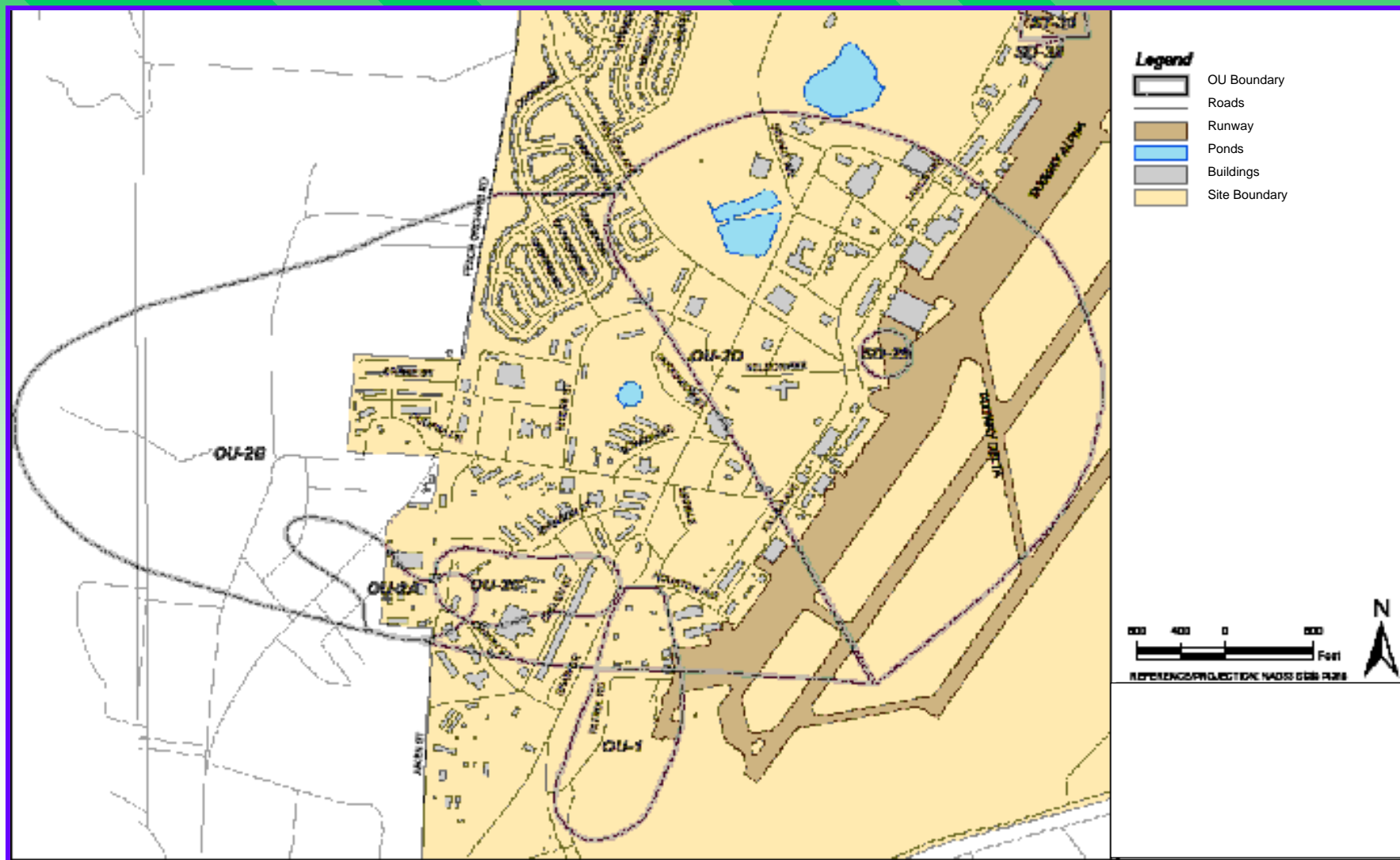


•<http://www.scdhec.net/environment/lwm/HTML/hazwaste.htm>

Off-Site Contamination

- What is the contaminant?
- Are there private wells in the path of contamination?
- Who is potentially impacted?
- Path forward
 - Notify residents
 - Test wells

Off-Site Plume



Unexploded Ordnance



UXOs Found at Bases in SC



Public Participation

- How do we involve the public?
 - Public invited to comment on permit and corrective action decisions
 - Public meetings for all major permit and corrective action decisions
 - Public hearings
 - Community outreach to concerned citizens and industry
 - Participation in World Cafe

